1. A method of scanning an array, said method comprising:

providing an optical scanner system comprising a processor and a scanning lens assembly;

providing an array opposite said scanning lens assembly, said array comprising a substrate and a plurality of array features ;

scanning a first row with said lens assembly, utilizing an adaptive control algorithm to maintain focus on said array features in said first row by accounting for a slope of said substrate;

calculating an $I_{forward}$ integral term up to or near an end of said first row;

reversing scan direction to scan a second, adjacent row; and

initially using the negative of said $I_{forward}$ term to set a focus of said lens assembly at a start of scanning said second row.

2. The method of claim 1, wherein motion of a caddy carrying said array sets said focus.

3. The method of claim 1, wherein a position of said lens assembly is held substantially constant relative to a caddy carrying said array from a termination of scanning said first row to said start of scanning said second row.

4. The method of claim 1, further comprising calculating an $I_{resting}$ term, wherein two times the value of said $I_{resting}$ term is added to said $I_{forward}$ term at said start of scanning said second row to set said focus.

5. The method of claim 1, wherein said adaptive control algorithm is a PI algorithm.

6. The method of claim 1, wherein said adaptive control algorithm is a PID algorithm.

7. The method of claim 1 carried out in reading a biopolymer array.

8. The method of claim 7, wherein the biopolymer is selected from the group consisting of polypeptides and nucleic acids.

9. The method of claim 8, further comprising:

wherein said method further comprises a data transmission step in which a result from a reading of the array is transmitted from a first location to a second location.

10. The method of claim 9, where said second location is a remote location.

11. A method comprising receiving data representing a result of a reading obtained by the method of claim 9.

12. A system programmed to operate according to a method selected from a group consisting of the scanning methods of claims 1-11.

13. A computer-readable medium embodying a program to direct a scanner system to perform a method selected from a group consisting of the scanning methods of claims 1-11.

14. A computer-readable medium containing data representing array sample results, wherein said data is made by a method selected from a group of methods consisting of the optical scanning methods of claims 1-11.

15. An optical scanner system comprising:

a processor and a lens assembly positioned opposite an array caddy; and

a plurality of servo mechanisms to control a relative position of said lens assembly and said caddy in three axes;

wherein said processor is adapted to control focus of said lens for sequential opposite-direction scans on array features situated on an array substrate to be carried by said caddy, by utilizing the negative of a forward integral term at an end of a scan region accounting for a forward slope of said substrate as a reverse integral term accounting for a reverse slope of said substrate upon reentering said scan region.

16. The system of claim 15, wherein at least one servo mechanism controlling said caddy manipulates said focus.

17. The system of claim 15, wherein said adaptation comprises a PI type adaptive algorithm.

18. The system of claim 15, wherein said adaptation comprises a PID type adaptive algorithm.

19. The system of claim 15, wherein said integral term is $I_{forward}$.

20. The system of claim 15, wherein said system is further adapted to hold a substantially constant position of said lens assembly relative to said caddy between said opposite direction scans.

21. The system of claim 20, wherein said system is further adapted to measure a bias required to hold said substantially constant position, and said system is also adapted to use two times a bias integral term, based on said bias, to set focus for said reverse slope.

22. The system of claim 21, wherein said bias integral term is $I_{resting}$.

23. The system of claim 15, wherein said system further comprises a biopolymer array.

24. The system of claim 23 wherein the biopolymer array is selected from the group consisting of a polypeptide array and a nucleic acid array.